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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,833	12/27/2001	Todd A. Thompson	9345.7121-CON 4	9612
7590	09/23/2004		EXAMINER	
RYAN KROMHOLZ & MANION, S.C. Post Office Box 26618 Milwaukee, WI 53226-0618			SMITH, RUTH S	
			ART UNIT	PAPER NUMBER
			3737	

DATE MAILED: 09/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/034,833

Applicant(s)

THOMPSON ET AL. *an*

Examiner

Ruth S Smith

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-67 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-67 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/29/03</u> . | 6) <input type="checkbox"/> Other: ____ |

Drawings

The informal drawings filed in this application are acceptable for examination purposes. When the application is allowed, applicant will be required to submit new formal drawings.

Specification

The disclosure is objected to because of the following informalities: On page 1, applicant should update the status of the continuing data. Appropriate correction is required.

Claim Objections

Claims 7,28,35 are objected to because of the following informalities: In claims 7,28, "the housing" lacks antecedent basis. In claim 35, "the axis of the sternum" lacks antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1,8-14,38-43,50-57 are rejected under 35 U.S.C. 102(e) as being anticipated by Bond et al ('772). Bond et al disclose a system for treating a thoracic cavity comprising an ultrasound applicator 42 adapted to be coupled to a generator 40 and an agent administered to the patient to promote dissolution of thrombi. The agent can be a thrombolytic agent, an anticoagulant, an antiplatelet, aspirin and a fibrinolytic drug such as tPA or streptokinase. Bond et al disclose that the ultrasound applicator 42 can be the one disclosed in US Patent No. 5,879,314 to Peterson et al which is

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incorporated by reference. The applicator therefore includes all of the limitations as set forth in claims 8-14, 50-57.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2-7,15-37,44-49,58-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bond et al in view of Talish et al ('070). Bond et al disclose a system for treating a thoracic cavity comprising an ultrasound applicator 42 adapted to be coupled to a generator 40 and an agent administered to the patient to promote dissolution of thrombi. The agent can be a thrombolytic agent, an anticoagulant, an antiplatelet, aspirin and a fibrinolytic drug such as tPA or streptokinase. Bond et al disclose that the ultrasound applicator 42 can be the one disclosed in US Patent No. 5,879,314 to Peterson et al which is incorporated by reference. The applicator therefore includes all of the limitations as set forth in claims 23,29-34. Talish et al disclose an ultrasound treatment device having an assembly for positioning a transducer on the chest of a patient so that treatment can be provided without having an operator

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constantly hold the applicator. Talish et al disclose a system for applying ultrasound to the thoracic cavity of a patient comprising an electric signal generating machine 12, an ultrasound applicator 16, and an assembly for placing the applicator on the patient. The assembly includes a quick release mechanism as seen at the end of straps 20 in figure 1 and a quick release material as seen by the Velcro in figure 5. As seen in figure 1, the assembly can include a halter worn about the chest and shoulders. The electrical signal generating machine is battery powered in that the device 12 is disclosed as being the same structure as that used in US Patent No. 5,556,372 which discloses use of a battery 32. It would have been obvious to one skilled in the art to have modified Bond et al such that it includes the assembly of Talish et al in order to provided means for stabilize placement of the applicator on the desired area without having an operator to continuously hold such. The use of hook and loop fasteners are old and well known and it would have been obvious to one skilled in the art to have replaced the clips with hook and loop fasteners. Such a modification merely involves the substitution of one well known type of quick release mechanism for another. With regard to claims 5-6, 26,27,47,48, the specific arrangement of the assembly used would have been an obvious design choice of known equivalents for providing placement of the transducer on the desired location. With regard to claims 7,28, 49, the straps comprise spaced apart members. With regard to claims 15,16, 36,37,58,59, Talish et al disclose means to releasably couple to transducer assembly to the electric generating means/battery. It would have been obvious to one skilled in the art to have further modified Bond et al such that it includes means to releasably couple to transducer assembly to the electric generating means in order to be able to easily change the battery if necessary. With respect to claim 35, in the absence of any showing of criticality, the specific shape of the applicator would have been an obvious design choice. It should be noted that Talish et al disclose the use of multiple applicators if necessary in order to cover a larger area of interest.

Claims 60-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bond et al in view of Barsotti et al. Bond et al disclose a system for treating a thoracic

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cavity comprising an ultrasound applicator 42 adapted to be coupled to a generator 40 and an agent administered to the patient to promote dissolution of thrombi. The agent can be a thrombolytic agent, an anticoagulant, an antiplatelet, aspirin and a fibrinolytic drug such as tPA or streptokinase. Bond et al disclose that the ultrasound applicator 42 can be the one disclosed in US Patent No. 5,879,314 to Peterson et al which is incorporated by reference. The applicator therefore includes all of the limitations as set forth in claims 8-14, 50-57. Bond et al fails to specifically disclose the use of either or both continuous or pulsed wave ultrasound. Barsotti et al disclose that ultrasound therapy can be provided in either continuous wave mode or pulsed wave mode. Barsotti et al further disclose that various operating modes can be selected and varied depending upon the treatment desired. The modes can comprise different output power levels and are either pulsed or continuous wave ultrasound. In the absence of any showing of unexpected results the specific operating parameters selected would have been an obvious design choice without undue experimentation for achieving the desired effect. Therefore, it would have been obvious to one skilled in the art to have further modified Bond et al to include means for varying the operating parameters as disclosed by Barsotti in order to allow one to change the conditions of the treatment provided.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ruth S Smith whose telephone number is (703) 308-3063. The examiner can normally be reached on M-F 5:30 AM- 2:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on (703) 308-3552. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ruth S Smith
Primary Examiner
Art Unit 3737

RSS